In the claims: The claims are as follows.

1. (Currently amended) A method by which a radio access network ~~(16)~~ coupled to a core network ~~(18)~~ monitors wireless transmission of packets according to a layered protocol, the radio access network ~~(16)~~ including equipment implementing a radio layer ~~(12)~~ and an upper layer ~~(14)~~ of the layered protocol, the radio layer ~~(12)~~ and the upper layer ~~(14)~~ distinguished at least in that the radio layer ~~(12)~~ receives data as packets from the upper layer ~~(14)~~ and prepares the data for transmission over the air by forming radio frames corresponding to the packets, the method characterized by:

a step ~~(23)~~ of slow release in which the upper layer ~~(14)~~ removes from a buffer maintained by the upper layer ~~(14)~~ the oldest packet in the buffer when the buffer is full and a new packet arrives, and does so independently of whether the oldest packet has been acknowledged by the radio layer (12) ~~of the terminal~~; and

a step ~~(24)~~ of local acknowledgement in which the radio layer ~~(12)~~ sends a local acknowledgement to the upper layer ~~(14)~~ on the occurrence of a predetermined event.

2. (Currently amended) A method as in claim 1, further characterized in that in the step ~~(24)~~ of local acknowledgement, the radio layer ~~(12)~~ includes with the local acknowledgement a sequence number.

3. (Currently amended) A method as in claim 2, further characterized in that the upper layer ~~(14)~~ removes the packet in the buffer having a sequence number equal to the sequence number included with the local acknowledgement, and also removes all older packets in the buffer.

4. (Currently amended) A method as in claim 1, further characterized in that the step ~~(24)~~ of local acknowledgment triggers special mode buffer management by the upper layer ~~(14)~~ in which the step ~~(23)~~ of slow release is at least temporarily discontinued and steps ~~(26)~~ are performed in which packets are instead removed by the upper layer ~~(14)~~ whenever a subsequent local acknowledgement is received along with a sequence number, the upper layer ~~(14)~~ then removing the packet with the sequence number accompanying the local acknowledgement as well as all older packets.

5. (Currently amended) A method as in claim 4, further characterized by a step ~~(27)~~ of returning to a normal-mode buffer management upon receiving a trigger-to-normal-mode local acknowledgment.

6. (Currently amended) A method as in claim 5, wherein the trigger-to-normal-mode local acknowledgment is identified as such by the upper layer ~~(14)~~ on the basis of whether or not it includes a sequence number.

7. (Currently amended) A method as in claim 5, wherein the trigger-to-normal-mode local acknowledgment is identified as such by the upper layer ~~(14)~~ on the basis of whether or not a flag it includes is set.

8. (Original) A method as in claim 7, wherein the local acknowledgment includes a sequence number.

9. (Currently amended) A method as in claim 8, wherein the sequence number serves as a signal to the upper layer ~~(14)~~ to remove the packet with the sequence number as well as all older packets.

10. (Original) A method as in claim 7, wherein the local acknowledgment does not include a sequence number.

11. (Currently amended) A method as in claim 5, wherein the trigger-to-normal-mode local acknowledgment is identified as such by the upper layer ~~(14)~~ on the basis of whether or not it is a different type of message than the local acknowledgment triggering special mode buffer management.

12. (Original) A method as in claim 11, wherein the local acknowledgment includes a sequence number.

13. (Currently amended) A method as in claim 12, wherein the sequence number serves as a signal to the upper layer ~~(14)~~ to remove the packet with the sequence number as well as all older packets.

14. (Original) A method as in claim 11, wherein the local acknowledgment does not include a sequence number.

15. (Currently amended) A method as in claim 4, wherein the upper layer ~~(14)~~ does not remove packets from the buffer while in special mode unless the buffer is full.

16. (Currently amended) A method as in claim 4, wherein the upper layer ~~(14)~~ uses a larger buffer while in special mode.

17. (Original) A method as in claim 4, further characterized in that the local acknowledgement is included with a handover trigger message.

18. (Currently amended) A method as in claim 1, further characterized in that in the step ~~(24)~~ of local acknowledgement

the radio layer signals to the upper layer ~~(14)~~ a release of the buffer to a target entity.

19. (Currently amended) A computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by one or more computer processors in a radio access network ~~(16)~~, with said computer program code characterized in that it includes instructions for performing the steps of the method of claim 1.

20. (Currently amended) A radio access network ~~(16)~~ comprising equipment ~~(12-14)~~ comprising means for performing the method of claim 1.

21. (Currently amended) A radio access network ~~(16)~~ coupled to a core network ~~(18)~~ of a wireless communication system, the radio access network ~~(16)~~ comprising elements for use in monitoring wireless transmission of packets according to a layered protocol, the elements including equipment implementing a radio layer ~~(12)~~ and an upper layer ~~(14)~~ of the layered protocol, the radio layer ~~(12)~~ and the upper layer ~~(14)~~ distinguished at least in that the radio layer ~~(12)~~ receives data as packets from the upper layer ~~(14)~~ and prepares the data for transmission over the air by forming radio frames corresponding to the packets, the radio access network ~~(16)~~ characterized in that:

the upper layer ~~(14)~~ performs buffer management according to either a normal mode ~~(23)~~ or a special mode ~~(27)~~ and in the normal mode ~~(23)~~ the upper layer ~~(14)~~ performs a slow release procedure in which it removes from a buffer it maintains the oldest packet in the buffer when the buffer is full and a new packet arrives, and does so independently of whether the oldest

packet has been acknowledged by the radio layer ~~(12) of the terminal~~; and

the radio layer ~~(12)~~ triggers ~~(24)~~ the upper layer ~~(14)~~ to perform buffer management according to the special mode ~~(27)~~ by sending a local acknowledgment to the upper layer ~~(14)~~ on the occurrence of a predetermined event.

22. (Currently amended) A radio access network ~~(16)~~ as in claim 21, further characterized in that in triggering ~~(24)~~ buffer management according to the special mode ~~(27)~~, the radio layer ~~(12)~~ includes with the local acknowledgement a sequence number.

23. (Currently amended) A radio access network ~~(16)~~ as in claim 21, further characterized in that in special mode the upper layer ~~(14)~~ at least temporarily discontinues the slow release procedure and instead removes packets from the buffer whenever a subsequent local acknowledgement is received along with a sequence number, the upper layer then removing the packet with the sequence number accompanying the local acknowledgement as well as all older packets.

24. (Currently amended) A radio access network ~~(16)~~ as in claim 23, further characterized in that the radio layer ~~(12)~~ triggers the upper layer ~~(14)~~ to return to normal mode by providing to the upper layer ~~(14)~~ a trigger-to-normal-mode local acknowledgment.

25. (Currently amended) A radio access network ~~(16)~~ as in claim 21, further characterized in that upon receiving the local acknowledgement, the upper layer ~~(14)~~ releases the buffer to a target entity instead of performing buffer management according to the special mode.

26. (Currently amended) A wireless communication system,

comprising a core network ~~(18)~~, a terminal ~~(11)~~, and a radio access network ~~(16)~~ according to claim 20 and communicatively coupling the terminal ~~(11)~~ to the core network ~~(18)~~.